

Commonwealth of Kentucky
Division for Air Quality
EXECUTIVE SUMMARY

PROPOSED

Title V / Synthetic Minor, Operating / Construction

Permit: V-08-014

University of Kentucky

Lexington, KY 40506

September 15, 2008

Herbert Campbell, Reviewer

SOURCE ID: 21-067-00003

AGENCY INTEREST: 1104

ACTIVITY: APE20080001

SOURCE DESCRIPTION:

On March 27, 2008, the University of Kentucky applied to the Division for the renewal permit of their existing permit [V-03-023 R2] for their facility in Lexington, Kentucky. The University of Kentucky (UK) is a public education institution that has a Title V operating permit, V-03-023 Revision 2, covering its main campus in Lexington Kentucky. UK is permitted to operate 23 indirect heat exchangers larger than 1.0 MMBtu/hr, 66 indirect heat exchangers 1.0 MMBtu/hr or less, 81 backup diesel generators, 2 paint booths and additional insignificant activities. The plant is classified as a Title V, Synthetic Minor source due to its having potential emissions of regulated air pollutants nitrogen oxides (NO_x), sulfur dioxide (SO₂) and carbon monoxide (CO), greater than a major source threshold. This permit contains practically enforceable limit to preclude the applicability of Prevention of Significant Deterioration of Air (PSD), 401 KAR 51:017. The permittee is requesting limited paint usage for the paint booths located in the Reynolds Building, Transportation Research Center and the Medical Center (formerly EUI 49 &50) to less than 200 gallons per year. Additionally, these units are now classified as insignificant units due to the limitation, and the potential emissions of any regulated air pollutant from each unit shall not exceed five tons per year.

In Revision 2, the five diesel fired emergency generators, emission units (EU) 60, 61, 62, 67, and 68 were permitted as 2885 horsepower, with 500 hours per year operation. However, upon site inspection, the Division for Air Quality (DAQ) noted that EU 60, 61 and 62, which have been operational since March 2007, were purchased at 3286 horsepower, while EU 67 and 68 have not been installed yet. The permittee resubmitted a revised application on July 9, 2008 for the upgraded emergency generators, with calculation based on AP-42 emission factors reducing the hours and limited the hours of 500 for the five units. The source has also decommissioned a 1004 HP (746 KW) diesel generator which was one of emission unit 54 (eight generators). This has been replaced by a smaller generator at a capacity of 755HP or 450 KW (4.3 MMBtu/hr), and will be identified as emission unit 69. The calculation using emission factors from AP-42 and reduced hours per year for all five units shows that the emissions are lower than the previously submitted calculation. Also the emissions are below significant emission rate (SER) and Prevention of Significant Determination (PSD) thresholds [401 KAR 51:001]. The applicable regulation for EU's 60, 61, 62, 67, 68 and 69 will be the same as that from the last permitting action. All 502(b)10/off permit changes have also been incorporated into this renewal permit.

PUBLIC AND AFFECTED STATE REVIEW:

On August 15, 2008, the public notice on availability of the draft permit and supporting material for comments by persons affected by the plant was published in the *Lexington Herald-Leader* in Lexington, Kentucky. The public comment period expired 30 days from the date of publication. No states are affected by this permit action.

No comments were received during this period. The final determination of this Division is that the proposed operation will comply with all air quality regulations and requirements. The permit is now being issued as proposed. A final permit will be issued after the U.S. EPA's 45-day review.